

METRIC
MIL-STD-2411-1
30 AUGUST 1994

**MILITARY STANDARD
REGISTERED DATA VALUES FOR
RASTER PRODUCT FORMAT**



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FOREWORD

DEPARTMENT OF DEFENSE

1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Director, Defense Mapping Agency, ATTN: TI, ST A-10, 8613 Lee Highway, Fairfax, VA 22031-2137 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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1. SCOPE 1.1 Scope. This document is a companion document to the military standard for Raster Product Format (RPF), MIL-STD-2411. It contains all registered data values referenced in the standard.

1.2 Purpose. This document is intended to supply producers and users of RPF products with the registered data values necessary to produce and interpret RPF data.

1.3 Application. The Military Departments, Office of the Secretary of Defense, Organizations of the Joint Chiefs of Staff, and the Defense Agencies of the Department of Defense (collectively known as DoD components) shall use the information in this document in preparing and accessing digital geographic data required or specified to be in RPF.

1.4 Security. This standard is UNCLASSIFIED. The registered data values presented herein may be used for classified processing where appropriate security provisions are added.

2. APPLICABLE DOCUMENTS 2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the current Department of Defense Index of Specifications and Standards (DODISS).

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Military Standard for
Raster Product Format

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents, drawings, and publications. The following other government documents, drawings and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

a. DIAM 65-19, Defense Intelligence Agency Standard Security Markings.

(Applications for copies should be addressed to Headquarters, Defense Intelligence Agency, Central Reference Division, Compartmented Reference Archive, ATTN: RTS-2E3, Wash., DC 20301).

b. DMA Technical Manual, DMA TM 8358.1, Defense Mapping Agency: Datums, Ellipsoids, Grids, and Grid Reference Systems, Preliminary Edition.

(Application for DMA TR copies should be addressed to Defense Mapping Agency, ATTN: AM, ST A-2, 8613 Lee Highway, Fairfax, VA 22031-2137)

2.2 Non-Government publications. This section is not applicable to this standard.

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets, or military sheet standards) the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. DEFINITIONS 3.1 Acronyms used in this standard. The following definitions are applicable for the purpose of this standard.

- a. ASCII American Standard Code for Information Interchange
- b. CMYK Cyan, Magenta, Yellow and Black
- c. DIAM Defense Intelligence Agency Manual
- d. DMA Defense Mapping Agency
- e. NITF National Imagery Transmission Format
- f. RGB Red, Green, Blue
- g. RGBM Red, Green, Blue and Monochromatic
- h. RPF Raster Product Format
- i. VQ Vector Quantization

4. GENERAL REQUIREMENTS This document provides all registered data values to be used in products that conform to the RPF military standard (MIL-STD-2411). The data includes identification codes, attribute and parameter tables, and other tables required for RPF products. RPF includes several distinct file types (e.g., [table of contents file], [frame file]). Some of the registered data values found in this document are unique to particular file types, and others are found in several different file types.

The specific registered values are listed in section 5, Detailed Requirements. The format is such that new registered values can easily be added to specific subsections. Where applicable, unused identification codes have been marked as reserved for future use.

5. DETAILED REQUIREMENTS Section 5 is a listing of the registered data values that are used in RPF products.

Each of the subsections in section 5 will include a description of the registered data unique to that subsection, the code or ID corresponding to the data field, and, in some cases the size and data type of that code. The data types used are listed in TABLE 1 and defined in MIL-STD-2411. All registered data field types and sizes are defined in MIL-STD-2411.

TABLE 1. Data Types and Their Abbreviations

Data Type	Abbreviation
ASCII string	asci
Bit string	bits
Byte string	byte
Boolean	bool
Integer (signed)	ints
Integer (unsigned)	uint
Real	real

Section 5.1 describes global data. Global data is defined here as data that can occur in more than one type of RPF file (i.e., <section/component id> values are necessary in all RPF files). Section 5.2 describes data that is used only in the [table of contents file]. Section 5.3 describes data that is used only in the [frame file].

NOTE: An "*" next to a value or row in a table indicates values or products that are used in user specified applications of RPF that have not been approved for joint use.

5.1 Global data. Data in this section will pertain to information that may be used in more than one type of RPF file.

5.1.1 Section/Component ID codes. The following are the valid <section/component id> codes currently defined in MIL-STD-2411.

<section/component id>	[section/component]
1-127	Reserved for future standardization
128	header component
129	location component
130	coverage section subheader
131	compression section subheader
132	compression lookup subsection
133	compression parameter subsection
134	color/grayscale section subheader
135	colormap subsection
136	image description subheader
137	image display parameters subheader
138	mask subsection
139	color converter subsection
140	spatial data subsection
141	attribute section subheader
142	attribute subsection
143	explicit areal coverage table
144	related images section subheader
145	related images subsection
146	replace/update section subheader
147	replace/update table
148	boundary rectangle section subheader
149	boundary rectangle table
150	frame file index section subheader
151	frame file index subsection
152	color table index section subheader
153	color table index record
154-65535	Reserved for future standardization

5.1.2 Color/grayscale section codes. The following sections define the valid [color/grayscale section] codes currently defined for RPF products, which include <color/grayscale table id> codes and <color converter codes>. The two types of table id's can be defined as traditional color/grayscale tables that contain values for the various color planes and/or bands within an image, and color converter tables, which define a mapping between two color/grayscale tables. Sections 5.1.2.1 and 5.1.2.2 describe the two [color/grayscale] section codes in more detail.

5.1.2.1 Color table codes. Each of the color/grayscale tables identified in the table below represents a particular

organization of the color planes in the table. For example, a color table containing Red, Green and Blue (RGB) color planes would have an id of one indicating an RGB arrangement of the table. Examples of other arrangements of the color table that are currently registered in RPF include Red, Green, Blue, Monochromatic (RGBM), Monochromatic (M), and Cyan Magenta Yellow, Black (CMYK), which is often used in color printing.

<>	Description
1	RGB
2	RGBM
3	M
4	CMYK
5-65535	Reserved for future standardization

5.1.2.2 Color conversion codes. The color conversion table maps the colors from one color/grayscale table into another color/grayscale table. If a user is unable, or does not choose, to use the primary color/grayscale table in an RPF file, the color conversion table can be used to map the primary colors into the closest matching colors within the alternate table. These names used to describe the <color/grayscale table id>'s begin with the letters CCT/. The number immediately after the slash (/) is the <color/grayscale table id> of the primary color table, and the number after the arrow (->) is the alternate color table id. In cases where the primary and alternate color tables contain the same color planes, the numbers after the slashes will be the same. In these cases the color converter table is often used to map a larger number of colors in the primary color table to a smaller number of colors in the alternate color table.

a. As an example of the use of a color conversion table, assume that an RPF file has two <color/grayscale tables id>s and one <color converter table id>. The two [color/grayscale table] are RGBM (<color/grayscale table id> = 2) and therefore the appropriate [color converter table would map the primary RGBM into the alternate RGBM, (<color converter table id> = 5). The color conversion table is a mapping of the colors from the primary RGBM color table to the alternate RGBM color table as shown in figure 1. A call to display a color X from the primary color table will be routed to the color conversion table, where the index of X will be mapped to the index of Y, a color in the alternate color table.

<>	Description
1	CCT/1->1

2	CCT/1->2
3	CCT/1->3
4	CCT/1->4
5	CCT/2->2
6	CCT/2->3
7	CCT/2->4
8	CCT/3->3
10-65535	Reserved for future standardization

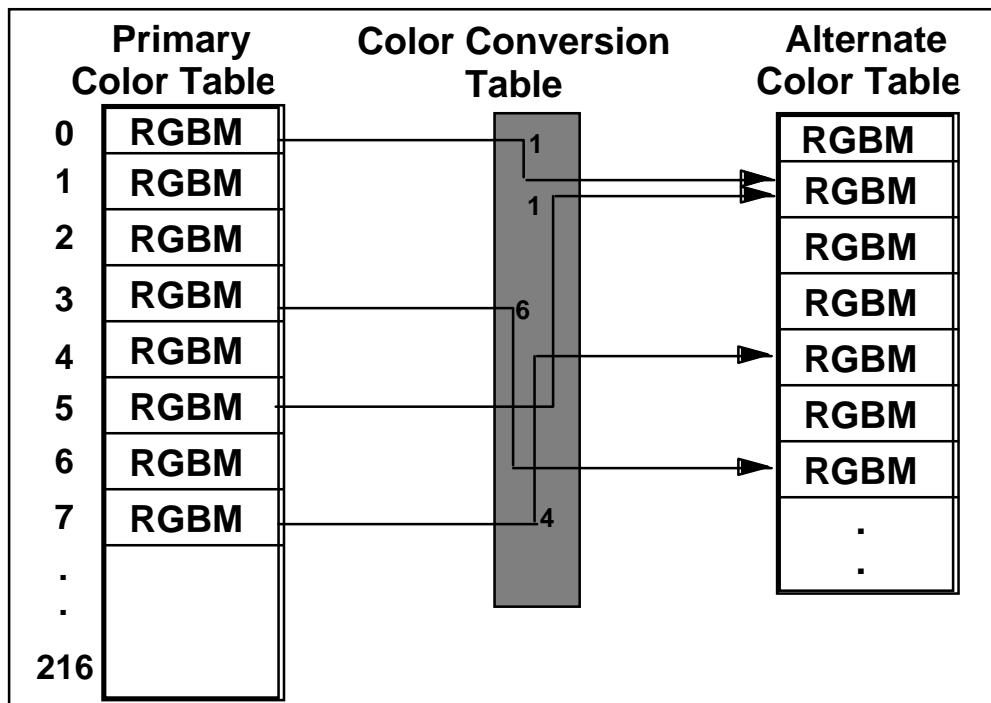


Figure 1. Color mapping between primary and alternate color tables.

5.1.3 Zone codes. are used in conjunction with the data series codes (5.1.4) to construct the <data series and zone> codes in 5.1.5. For products where zone code and/or data series is not applicable, the <data series and zone codes> shall consist of a 3-byte descriptor applicable to a particular product. No <data series and zone codes> are currently registered for such products.

Zone Number	Equatorward Latitude	Midpoint Latitude	Poleward Latitude
1,A	0°	22.94791772°	32°
2,B	32°	41.12682127°	48°

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3 , C	48°	52.28859923°	56°
4 , D	56°	60.32378942°	64°
5 , E	64°	66.09421768°	68°
6 , F	68°	70.10896259°	72°
7 , G	72°	74.13230145°	76°
8 , H	76°	78.17283750°	80°
9 , J	80°	—	90°

5.1.4 Data series codes. The are used in conjunction with the zone codes (5.1.3) to construct the <data series and zone> codes in 5.1.5. The specific methodology for creating the data series and zone codes is described in MIL-STD-2411.

Code	Series Abbr.	Scale /resolution	Data series	RPF data type
GN	GNC	1:5,000,000	Global Navigation Chart	CADRG
JN	JNC	1:2,000,000	Jet Navigation Chart	CADRG
ON	ONC	1:1,000,000	Operational Navigation Chart	CADRG
TP	TPC	1:500,000	Tactical Pilotage Chart	CADRG
LF	LFC	1:500,000	Low Flying Chart (UK)	CADRG
JG	JOG	1:250,000	Joint Operations Graphic	CADRG
JA	JOG-A	1:250,000	Joint Operations Graphic – Air	CADRG
JR	JOG-R	1:250,000	Joint Operations Graphic – Radar	CADRG
TF	TFC	1:250,000	Transit Flying Chart (UK)	CADRG
AT	ATC	1:200,000	Series 200 Air Target Chart	CADRG
TC	TLM	1:100,000	Topographic Line Map	CADRG
		100		
TL	TLM 50	1:50,000	Topographic Line Map	CADRG
HA	HA	Various	Harbor and Approach Charts	CADRG
CO	CO	Various	Coastal Charts	CADRG
OA	OPAREA	Various	Naval Range Operating Area Chart	CADRG
CG	CG	Various	City Graphics	CADRG
CM	—	Various	Combat Charts	CADRG
MM	—	Various	(Miscellaneous Maps & Charts)	CADRG
I1	—	10m	Imagery, 10 meter resolution	CIB
I2	—	5m	Imagery, 5 meter resolution	CIB
D1 *	---	100m	Elevation Data from DTED level 1	CDTED
D2 *	---	30m	Elevation Data from DTED level 2	CDTED
OV †	—	Various	Overview image	ANY

* See note in paragraph 5.

† The <data series> and <data series and zone codes> for the overview image for individual products conform to the RPF standard, and the specific 3-character code used for the <data series and zone codes> are as defined in the individual product specifications.

5.1.5 Data series and zone codes. The following are the valid <data series and zone> codes currently defined for RPF data.

NORTHERN HEMISPHERE

Data series	ZONE								
	1	2	3	4	5	6	7	8	9
GN	GN1	GN2	GN3	GN4	N/A	N/A	GN7	N/A	GN9
JN	JN1	JN2	JN3	JN4	JN5	JN6	JN7	JN8	JN9
ON	ON1	ON2	ON3	ON4	ON5	ON6	ON7	ON8	ON9
TP	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9
LF	LF1	LF2	LF3	LF4	LF5	LF6	LF7	LF8	LF9
JG	JG1	JG2	JG3	JG4	JG5	JG6	JG7	JG8	JG9
JA	JA1	JA2	JA3	JA4	JA5	JA6	JA7	JA8	JA9
JR	JR1	JR2	JR3	JR4	JR5	JR6	JR7	JR8	JR9
TF	TF1	TF2	TF3	TF4	TF5	TF6	TF7	TF8	TF9
AT	AT1	AT2	AT3	AT4	AT5	AT6	AT7	AT8	AT9
TC	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8	TC9
TL	TL1	TL2	TL3	TL4	TL5	TL6	TL7	TL8	TL9
HA	HA1	HA2	HA3	HA4	HA5	HA6	HA7	HA8	HA9
CO	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9
OA	OA1	OA2	OA3	OA4	OA5	OA6	OA7	OA8	OA9
CG	CG1	CG2	CG3	CG4	CG5	CG6	CG7	CG8	CG9
CM	CM1	CM2	CM3	CM4	CM5	CM6	CM7	CM8	CM9
MM	MM1	MM2	MM3	MM4	MM5	MM6	MM7	MM8	MM9
I1	I11	I12	I13	I14	I15	I16	I17	I18	I19
I2	I21	I22	I23	I24	I25	I26	I27	I28	I29
D1 *	D11	D12	D13	D14	D15	D16	D17	D18	D19
D2 *	D21	D22	D23	D24	D25	D26	D27	D28	D29

* See note in paragraph 5.

SOUTHERN HEMISPHERE

Data series	ZONE								
	A	B	C	D	E	F	G	H	J
GN	GNA	GNB	GNC	GND	N/A	N/A	GNG	N/A	GNJ
JN	JNA	JNB	JNC	JND	JNE	JNF	JNG	JNH	JNJ
ON	ONA	ONB	ONC	OND	ONE	ONF	ONG	ONH	ONJ
TP	TPA	TPB	TPC	TPD	TPE	TPF	TPG	TPH	TPJ
LF	LFA	LFB	LFC	LFD	LFE	LFF	LFG	LFH	LFJ
JG	JGA	JGB	JGC	JGD	JGE	JGF	JGG	JGH	JGU
JA	JAA	JAB	JAC	JAD	JAE	JAF	JAG	JAH	JAJ
JR	JRA	JRB	JRC	JRD	JRE	JRF	JRG	JRH	JRJ
TF	TFA	TFB	TFC	TFD	TFE	TFF	TFG	TFH	TFJ
AT	ATA	ATB	ATC	ATD	ATE	ATF	ATG	ATH	ATJ
TC	TCA	TCB	TCC	TCD	TCE	TCF	TCG	TCH	TCJ
TL	TLA	TLB	TLC	TLD	TLE	TLF	TLG	TLH	TLJ
HA	HAA	HAB	HAC	HAD	HAE	HAF	HAG	HAH	HAJ
CO	COA	COB	COC	COD	COE	COF	COG	COH	COJ
OA	OAA	OAB	OAC	OAD	OAE	OAF	OAG	OAH	OAJ
CG	CGA	CGB	CGC	CGD	CGE	CGF	CGG	CGH	CGJ
CM	CMA	CMB	CMC	CMD	CME	CMF	CMG	CMH	CMJ
MM	MMA	MMB	MMC	MMD	MME	MMF	MMG	MMH	MMJ
I1	I1A	I1B	I1C	I1D	I1E	I1F	I1G	I1H	I1J
I2	I2A	I2B	I2C	I2D	I2E	I2F	I2G	I2H	I2J
D1 *	D1A	D1B	D1C	D1D	D1E	D1F	D1G	D1H	D1J
D2 *	D2A	D2B	D2C	D2D	D2E	D2F	D2G	D2H	D2J

* See note in paragraph 5.

5.1.6 Product data types. The following are the valid <product data type>s currently registered for RPF products.

Product Data Type	Product Name
ADRG	ARC Digitized Raster Graphics
ADRI	ARC Digital Raster Imagery
CADRG	Compressed ARC Digitized Raster Graphics
CIB	Controlled Image Base
CDTED *	Compressed Digital Terrain Elevation Data
DTED *	Digital Terrain Elevation Data

* See note in paragraph 5.

5.1.7 Security country/international codes. The following are the registered <Security Country/International Codes> for RPF products.

<u>Code</u>	<u>Description</u>
AB	Abu Musa (Disputed Island In Persian Gulf
AF	Afghanistan
AL	Albania
AG	Algeria
AQ	American Samoa (US)
ZQ	Andaman Islands (IN)
AN	Andorra
AO	Angola
AV	Anquilla (Leeward Islands) (UK)
YR	Annobon (Pagulu) (EK)
AY	Antarctica
AC	Antigua-Barbuda
AR	Argentina
AM	Armenia
AA	Aruba (NL)
AT	Ashmore & Cartier Islands (AS)
AS	Australia
AU	Austria
AJ	Azerbaijan
AZ	Azores (PO)
BF	Bahama Islands
BA	Bahrain
FQ	Baker Islands (SP)
BG	Bangladesh

BB	Barbados
BS	Bassas Da India (FR)
BO	Belarus
BK	Belgium
BH	Belize
BK	Benin
BD	Bermuda
BT	Bhutan
BL	Bolivia
BK	Bosnia-Herzegovina
BC	Botswana
BV	Bovet Island (NO)
BR	Brazil
IO	British Indian Ocean Territory (Chagos Archipelago)
VI	British Virgin Islands (Leeward Islands)
BX	Brunei
BU	Bulgaria
UV	Burkina Faso (Upper Volta)
BM	Myanmar (Burma)
BY	Burundi
VK	Cabinda (AO)
CB	Kampuchea (Cambodia)
CM	Cameroon
CA	Canada
ZZ	Canary Islands (SP)
CV	Cape Verde Islands
ZL	Caroline Islands
CJ	Cayman Islands
CT	Central African Republic
CD	Chad
CI	Chile
CH	China, People's Republic of
KT	Christmas Island (Indian Ocean) (AS)
IP	Clipperton Island (FR)
CK	Cocos Islands (Keeling) (AS)
CO	Columbia
CN	Comoro Islands (AS)
CF	Congo
CW	Cook Islands (NZ)
CR	Coral Sea Islands (AS)
CS	Costa Rica
IV	Cote d'Ivoire (Ivory Coast)
VJ	Crete (Kriti) (GR)
HR	Croatia
CU	Cuba
CY	Cyprus
EZ	Czech Republic

DA	Denmark
YL	Diego Garcia
DJ	Djibouti

DO	Dominica
DR	Dominican Republic
XZ	Easter Island (Isla De Pascua) (CI)
EC	Ecuador
EG	Egypt
ES	El Salvador
YU	Elobey, Islas De
EK	Equatorial Guinea
ER	Eritrea
EN	Estonia
RT	Ethiopia
EU	Europa Island (FR)
FO	Farroe Islands (DE)
FK	Falkland Islands (UK) (Malvinas)
FJ	Fiji Islands
FI	Finland
FR	France
FG	French Guiana
FP	French Polynesia
FS	French Southern & Antarctic Lands
GB	Gabon
GA	Gambia
GZ	Gaza Strip (Is)
GG	Georgia
GM	Germany
QH	Ghana
GI	Gibraltar (UK)
GO	Glorioso Island (Ma)
GR	Greece
GL	Greenland
GJ	Grenada
GP	Guadeloupe (Leeward Islands)
GQ	Guam
GT	Guatemala
GK	Guernsey (UK)
GV	Guinea
PU	Guinea-Bissau
GY	Guyana
HA	Haiti
HM	Heard Island & McDonald Is (AS)
HO	Honduras
HK	Hong Kong (UK)
HQ	Howland Island (US)
HU	Hungary
IC	Iceland
IN	India
ID	Indonesia
IR	Iran
IZ	Iraq

EI	Ireland
IS	Israel

IT	Italy
JM	Jamaica
JN	Jan Mayen Is (NO)
JA	Japan
DQ	Jarvis Island (US)
JE	Jersey (UK)
JQ	Johnston Atoll (US)
JO	Jordan
JU	Juan De Nova Islands (FR)
YV	Juan Fernandez, Archipelago (CI)
KZ	Kazakhstan
KE	Kenya
KQ	Kingman Reef (US)
KN	Korea, North
KS	Korea, South
KU	Kuwait
KG	Kirghizia
LD	Lakshadweep Islands (IN)
LA	Laos
LG	Latvia
LE	Lebanon
LT	Lesotho
LI	Liberia
LY	Libya
LS	Liechtenstein
LH	Lithuania
LU	Luxembourg
MC	Macao (PO)
MK	Macedonia
ZX	Macais Nguema Biyogo
MA	Madagascar
VD	Madeira Islands (PO)
MI	Malawi
MY	Malaysia
MV	Maldives
ML	Mali
MT	Malta
IM	Isle of Man (UK)
RM	Republic of the Marshall Islands
MB	Martinique (FR)
MR	Mauritania
MP	Mauritius
MP	Mayotte (FR)
MX	Mexico
FM	Federated States of Micronesia
MQ	Midway Island (US)
MD	Moldova
MN	Monaco
MG	Mongolia

MW	Montenegro
MH	Montserrat
MO	Morocco
MZ	Mozambique
NA	Namibia
NR	Nauru
BQ	Navassa Island (US)
NP	Nepal
NL	Netherlands
NT	Netherlands Antilles
NC	New Caledonia (FR)
NZ	New Zealand
NU	Nicaragua
YZ	Nicobar Islands (IN)
NG	Niger
NI	Nigeria
NE	Niue (NZ)
NF	Norfolk Islands (AS)
WN	Northern Ireland
CQ	Northern Mariana Islands (US)
NO	Norway
XO	Okinawa (JA)
MU	Oman
PK	Pakistan
PS	Palau, Republic of (US)
LQ	Palmyra Atoll (US)
PM	Panama
PP	Papua New Guinea
PF	Paracel Islands (CH)
PA	Paraguay
PB	Pemba Island (TZ)
PE	Peru
RP	Philippines
PC	Pitcairn Island (UK)
PL	Poland
PO	Portugal
RQ	Puerto Rico (US)
QA	Qatar
RE	Reunion (FR)
RO	Romania
RS	Russia
RW	Rwanda
SH	Saint Helena, Ascension Island (UK)
ST	Saint Lucia
VC	Saint Vincent and the Grenadines
WC	Sala Y Gomez (CI)
YX	San Ambrosia Island (CI)
YK	San Felix Island (CI)
SM	San Marino

TP	Sao Tome and Principe
SD	Sardinia (IT)
SA	Saudi Arabia
SG	Senegal
SR	Serbia
SE	Seychelles
SL	Sierra Leone
SN	Singapore
LO	Slovakia
SI	Slovenia
SJ	Socotra (YM)
SP	Solomon Islands
SO	Somalia
SF	Republic of South Africa
SX	South Georgia & South Sandwich Is (UK).
WG	South Orkney Islands (UK)
WH	South Shetland Islands (UK)
SP	Spain
PG	Spratly Islands (CH, RP, MY, VM)
CE	Sri Lanka
SC	St. Christopher-Nevis
SB	St. Pierre Miquelon (CA)
SU	Sudan
NS	Surinam
SV	Svalbard (NO)
WZ	Swaziland
SW	Sweden
SZ	Switzerland
SY	Syria
TW	Taiwan and Penghu
TI	Tajikistan
TZ	Tanzania
TH	Thailand
TO	Togo
TL	Tokelau (NZ)
TN	Tonga Islands
TD	Trinidad and Tobago
TE	Tromelin Island (FR)
TS	Tunisia
TU	Turkey
TX	Turkmenistan
TK	Turks and Caicos Islands (UK)
TV	Tuvalu
UG	Uganda
UP	Ukraine
TC	United Arab Emirates
UK	United Kingdom
US	United States

| IQ

| US miscellaneous Pacific Islands

UY	Uruguay
UZ	Uzbekistan
NH	Vanuatu (Former New Hebrides)
VT	Vatican City
VE	Venezuela
VM	Vietnam
VQ	Virgin Islands (US, UK)
WQ	Wake Island (US)
WF	Wallis and Futuna Islands (FR)
YA	Walvis Bay (SF)
WE	West Bank
WI	Western Sahara (MO)
WS	Western Samoa
YM	Yemen
CG	Zaire
ZA	Zambia
ZY	Zanzibar (TZ)
ZI	Zimbabwe

5.1.8 Security classifications. The following <security classifications> are as defined in DIAM 65-19.

Code	Classification
T	Top Secret
S	Secret
C	Confidential
R	Restricted
U	Unclassified

5.1.9 Security release markings. The following <security release markings> are as defined in DIAM 65-19.

<u>Code</u>	<u>Release Marking</u>
AT	ATOMAL (NATO designation to identify restricted or formerly restricted data)
BX	Background use only
PI	Caution - Proprietary information involved (PROPIN)
CC	Continued Control
PX	Copyright
CS	COSMIC (Caveat applied to NATO Top Secret)
CN	Critical Nuclear Weapon Design Information/DoD directive 5210.2 applies (CNWDI)
CR	Cryptographic (CRYPTO)
OR	Dissemination and Extraction Of information controlled by originator (ORCON)
DS	Distribution Limited-Destroy when no longer needed (DIST LIM)
TX	Encrypted for Transmission Only
FO	For Official Use Only (FOUO)
RF	Formerly restricted data (FRD)
IC	Intelligence Components Only
LA	Limited
LU	Limited official use
UB	NFIB (National Foreign Intelligence Board) departments only (NFIB ONLY)
DA	No Dissemination Abroad
NT	Noncompartmented
NC	Not releasable to contractors/consultants
FN	Not releasable to foreign national (DoD)
NF	Not releasable to foreign nationals (NOFORN)
NS	NSC Participating Agencies Only
IN	Personal Data - Privacy Act
EZ	Releasable to Republic of Vietnam
RD	Restricted Data (RD)
SA	SAO
SL	SAO Handling Caveat #1 (SAO-1)
HA	SAO Handling Caveat #2 (SAO-2)
HB	SAO Handling Caveat #3 (SAO-3)
SK	SAO Special Intelligence Handling Caveat #2 (SAO-SI-2)
HC	SAO Special Intelligence Handling Caveat #3 (SAO-SI-3)
HD	SAO Special Intelligence Handling Caveat #4 (SAO-SI-4)

| SH | Single Integrated Operational Plan (SIOP) |

SE	Single Integrated Operational Plan/Extremely Sensitive Information (SIOP/ESI)
SC	Special Control
SU	Special Handling Required/Not Releasable to foreign Nationals
SI	Special Intelligence (SI)
SN	Special Intelligence Handling Caveat #1 (SI-1)
EP	Authorized for release to Australia (REL AUSTRALIA)
EN	Authorized for release to Canada (REL CANADA)
ER	This information has been authorized for release to CENTO (REL CENTO)
BZ	Authorized for release to Chile (REL CHILE)
EK	Authorized for release to Denmark (REL DENMARK)
EQ	Authorized for release to Federal Republic of Germany (FEDERAL REPUBLIC OF GERMANY)
FR	Authorized for release to France (REL FRANCE)
IG	Authorized for release to Greece (REL GREECE)
FV	Authorized for release to Israel (REL ISRAEL)
FY	Authorized for release to Italy (REL ITALY)
PM	Authorized for release to Japan (REL JAPAN)
MR	Authorized for release to Jordan (REL JORDAN)
ET	Authorized for release to NATO (REL NATO)
FP	Authorized for release to NATO Forces (REL NATO FORCES)
FC	Authorized for release to New Zealand (REL NEW ZEALAND)
EF	Authorized for release to Norway (REL NORWAY)
FX	Authorized for release to Taiwan (REL TAIWAN)
EO	Authorized for release to Republic of Korea (REL REPUBLIC OF KOREA)
ES	This Information has been Authorized for release to SEATO (REL SEATO)
IS	Authorized for release to Denmark
FW	Authorized for release to Spain (REL SPAIN)
ED	Authorized for release to Sweden (REL SWEDEN)
PF	Authorized for release to Thailand (REL THAILAND)
EA	Authorized for release to Turkey (REL TURKEY)
WN	Authorized for release to United Kingdom (REL UNITED KINGDOM)
WI	Warning Notice - Intelligence sources or Methods Involved (WNINTEL)

5.2 Table of contents data. This section defines codes that are used primarily in RPF [table of contents file]s.

5.2.1 Producer codes. The following are the valid <producer code>s currently registered for RPF products.

ID	Produc er code	Producer
1	AFACC	Air Force Air Combat Command
2	AFESC	Air Force Electronic Systems Center
3	DMAAC	Defense Mapping Agency Aerospace Center
4	DMAHC	Defense Mapping Agency Hydrographic Topographic Center
5	DMARC	Defense Mapping Agency Reston Center
6	DMASC	Defense Mapping Agency Systems Center
7	SOCASF	Air Force Special Operations Command
8	SOCOM	United States Special Operations Command
9	PACAF	Pacific Air Forces
10	USAFE	United States Air Force, Europe
11,A-Z		Reserved for future standardization

5.2.2 Compression ratio code. The compression ratio code is an ASCII field within the [table of contents] file of RPF products. Examples of text that may be found in this field are given below.

Code	Description
55:1	Digital product compressed approximately 55:1 with respect to the uncompressed data
12:1	Digital product compressed approximately 12:1 with respect to the uncompressed data
48:1	Digital product compressed approximately 48:1 with respect to the uncompressed data
UNC	Uncompressed RPF product
VAR	Variable compression ratio

5.3 Frame file data. This section defines codes that are used in the RPF [frame file].

5.3.1 Compression section. RPF data can be in a compressed or uncompressed format. This compression section defines valid codes for compression scheme parameters.

5.3.1.1 Compression algorithm ID. The following are the valid <compression algorithm id>s currently registered for RPF products.

ID	Compression Algorithm
1	VQJPEG Lossless *
2	
3-65535	Reserved for future standardization

* See note in paragraph 5.

5.3.1.2 Compression lookup table ID. The following are the valid <compression lookup table id>s currently registered for RPF products.

ID	Compression Lookup Table
1	1x4 Row 0 VQ
2	1x4 Row 1 VQ
3	1x4 Row 2 VQ
4	1x4 Row 3 VQ
5	4x4 VQ
6	2x2 VQ
7	Huffman Code *
8	Length of Huffman Code *
9	Huffman Value *
10-65535	Reserved for future standardization

* See note in paragraph 5.5.3.1.3 Compression parameter ID. The <compression parameter id> is a code which identifies parameters which may be used in the [compression section] of an RPF [frame file]. Not all compression schemes require <compression parameter id>s.

ID	Compression Parameter
1	JPEG data stream for Huffman table structure *
2-65535	Reserved for future standardization

5.3.1.4 Compression parameter value. The <compression parameter value> can be either an explicit value to be used in a compression scheme or an index to a table used in the compression of RPF [frame file]s. Not all compression schemes require <compression parameter value>s. Currently no <compression parameter value>s are registered.

5.3.2 Attribute section. The [attribute section] in RPF products defines ancillary or qualifying information about the data within the [frame file]s. The following tables list currently registered attributes and parameters for RPF products.

Attr ID	Attribute Description	Number of Parameters
1	Currency Date	1
2	Production Date	1
3	Significant Date	1
4	Map/Chart Source	4
5	Projection System	5
6	Vertical Datum	1
7	Horizontal Datum	1
8	Vertical Absolute Accuracy	2
9	Horizontal Absolute Accuracy	2
10	Vertical Relative Accuracy	2
11	Horizontal Relative Accuracy	2
12	Ellipsoid	1
13	Sounding Datum	1
14	Navigation System	1
15	Grid	1
16	Easterly Annual Magnetic Change	2
17	Westerly Annual Magnetic Change	2
18	Grid North-Magnetic North Angle	2
19	Grid Convergence Angle	2
20	Highest Known Elevation	4
21	Multiple Legend	1
22	Image Source	2
23*	Data Level	1

* See note in paragraph 5.

5.3.2.1 Attribute and parameter descriptions. The following are the valid parameters associated with attributes listed above and currently registered for RPF products.

(ID ::= 1)

Parameter ID	1	Description
Parameter Name	Currency Date	Date of most recent revision to the RPF product in the [frame file], in the form YYYYMMDD
Data Type	asci:8	

(ID ::= 2)

Parameter ID	1	Description
Parameter Name	Production Date	Date that the source data was transformed to RPF format, in the form YYYYMMDD
Data Type	asci:8	

(ID ::= 3)

Parameter ID	1	Description
Parameter Name	Significant Date	Date that most accurately describes the basic date of the source product, in the form YYYYMMDD. It can be the completion date, compilation date, collection date, revision date, or other date depending on the product and circumstances.
Data Type	asci:8	

(ID ::= 4)

Parameter ID	1	Description
Parameter Name	Data series designation	A short title for the identification of a group of products usually having the same scale and/or cartographic specification (e.g., JOG 1501A, JOG 1501G, or JOG 1501C)
Data Type	asci:10	
Parameter ID	2	Description
Parameter Name	Map Designation	The designation, within the data series, of the hardcopy source (e.g., if the hardcopy source is ONC G18, then the map designation is "G18").
Data Type	asci:8	
Parameter ID	3	Description
Parameter Name	Old Horizontal Datum Code	Original horizontal datum of the hardcopy product. A list of horizontal datum codes is given in 5.3.2.2
Data Type	asci:4	
Parameter ID	4	Description
Parameter Name	Edition Identifier	Edition number of the source graphic, which uniquely identifies a product within a series and item number.
Data Type	asci:7	

(ID ::= 5)

Parameter ID	1	Description
Parameter Name	Projection Code	Projection of the source hardcopy graphic, as listed in 5.3.2.3 [†]
Data Type	asci:2	
Parameter ID	2	Description
Parameter Name	Projection Parameter A	The value of the first projection parameter. A definition of the first projection parameter is given in 5.3.2.3
Data Type	real:4	
Parameter ID	3	Description
Parameter Name	Projection Parameter B	The value of the second projection parameter. A definition of the second projection parameter is given in 5.3.2.3
Data Type	real:4	
Parameter ID	4	Description
Parameter Name	Projection Parameter C	The value of the third projection parameter. A definition of the third projection parameter is given in 5.3.2.3
Data Type	real:4	
Parameter ID	5	Description
Parameter Name	Projection Parameter D	The value of the fourth projection parameter. A definition of the fourth projection parameter is given in 5.3.2.3
Data Type	real:4	

[†] A full description of the projection systems and their parameters can be found in DMA TM 8358.1.

(ID ::= 6)

Parameter ID	1	Description
Parameter Name	Vertical Datum Code	Vertical datum of this RPF [frame file] or areal extent, as listed in 5.3.2.2
Data Type	asci:4	

(ID ::= 7)

Parameter ID	1	Description
Parameter Name	Horizontal Datum Code	Horizontal datum of this RPF [frame file] or areal extent, as listed in 5.3.2.2
Data Type	asci:4	

(ID ::= 8)

Parameter ID	1	Description
Parameter Name	Vertical Absolute Accuracy	Vertical absolute accuracy of this RPF [frame file] or areal extent.
Data Type	uint:4	
Parameter ID	2	Description
Parameter Name	Accuracy Units of Measure	Units of measure for the vertical absolute accuracy, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 9)

Parameter ID	1	Description
Parameter Name	Horizontal Absolute Accuracy	Horizontal absolute accuracy of this RPF [frame file] or areal extent.
Data Type	uint:4	
Parameter ID	2	Description
Parameter Name	Accuracy Units of Measure	Units of measure for the horizontal absolute accuracy, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 10)

Parameter ID	1	Description
Parameter Name	Vertical Relative Accuracy	Vertical relative accuracy of this RPF [frame file] or areal extent.
Data Type	uint:4	
Parameter ID	2	Description
Parameter Name	Accuracy Units of Measure	Units of measure for the vertical relative accuracy, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 11)

Parameter ID	1	Description
Parameter Name	Horizontal Relative Accuracy	Horizontal relative accuracy of this RPF [frame file] or areal extent.
Data Type	uint:4	
Parameter ID	2	Description
Parameter Name	Accuracy Units of Measure	Units of measure for the horizontal relative accuracy, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 12)

Parameter ID	1	Description
Parameter Name	Ellipsoid Code	Ellipsoid used in this RPF [frame file] or areal extent, as listed in 5.3.2.5
Data Type	asci:3	

(ID ::= 13)

Parameter ID	1	Description
Parameter Name	Sounding Datum Code	Sounding datum used in this RPF [frame file] or areal extent, as listed in 5.3.2.2
Data Type	asci:4	

(ID ::= 14)

Parameter ID	1	Description
Parameter Name	Navigation System Code	Navigation system used in this RPF [frame file] or areal extent, as listed in 5.3.2.4
Data Type	uint:2	

(ID ::= 15)

Parameter ID	1	Description
Parameter Name	Grid Code	Grid code for this RPF [frame file] or areal extent, as listed in 5.3.2.7
Data Type	asci:2	

(ID ::= 16)

Parameter ID	1	Description
Parameter Name	Easterly Annual Magnetic Change	Annual magnetic change in the easterly direction for this RPF [frame file] or areal extent.
Data Type	real:4	
Parameter ID	2	Description
Parameter Name	Units of Magnetic Change	Units for the magnetic change, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 17)

Parameter ID	1	Description
Parameter Name	Westerly Annual Magnetic Change	Annual magnetic change in the westerly direction for this RPF [frame file] or areal extent.
Data Type	real:4	
Parameter ID	2	Description
Parameter Name	Units of Magnetic Change	Units for the magnetic change, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 18)

Parameter ID	1	Description
Parameter Name	Grid North-Magnetic North (G-M) Angle	Angle between north/south grid lines and magnetic north in this [frame file] or areal extent.
Data Type	real:4	
Parameter ID	2	Description
Parameter Name	Units of Angle	Units of measure for the grid north-magnetic north angle, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 19)

Parameter ID	1	Description
Parameter Name	Grid Convergence Angle	Angle between grid north and true north in this [frame file] or areal extent.
Data Type	real:4	
Parameter ID	2	Description
Parameter Name	Units of Angle	Units of measure for the grid convergence angle, as listed in 5.3.2.6
Data Type	uint:2	

(ID ::= 20)

Parameter ID	1	Description
Parameter Name	Highest Known Elevation	Highest known elevation for the RPF frame or areal extent.
Data Type	real:8	
Parameter ID	2	Description
Parameter Name	Units of elevation	Units of measure for the highest known elevation, as listed in 5.3.2.6
Data Type	uint:2	
Parameter ID	3	Description
Parameter Name	Latitude of elevation	Latitude in decimal degrees of the highest known elevation point within this RPF [frame file] or areal extent.
Data Type	real:8	
Parameter ID	4	Description
Parameter Name	Longitude of elevation	Longitude in decimal degrees of the highest known elevation point within this RPF [frame file] or areal extent.
Data Type	real:8	

(ID ::= 21)

Parameter ID	1	Description
Parameter Name	Legend File Name	Name of the legend file that applies to this areal extent
Data Type	asci:12	

(ID ::= 22)

Parameter ID	1	Description
Parameter Name	Data Source	Source of the data from which this RPF data was derived. Examples of this field as it would be included in CIB data include "SPOT", "Landsat7" or "Landsat4". For the CDTED product, examples of this attribute include "imagery", "carto". *
Data Type	ascii:12	
Parameter ID	2	Description
Parameter Name	GSD	Ground Sample or post Distance (GSD) of the RPF data
Data Type	uint:4	

(ID ::= 23) *

Parameter ID	1	Description
Parameter Name	Data Level	The level of the source for this data. For the CDTED product, this attribute would be used to distinguish between DTED/CDTED level 1 and DTED/CDTED level 2.
Data Type	Uint:2	

* See note in paragraph 5.

5.3.2.2 Datum codes. The following are the valid datum codes currently registered for RPF products.

Code	Name (Region)
ADIM	Adindan (Mean value: Ethiopia and Sudan)
ADIA	Adindan (Ethiopia)
ADIB	Adindan (Sudan)
ADIC	Adindan (Mali)
ADID	Adindan (Senegal)
AFG	Afgooye (Somalia)
AIN	Ain el Abd 1970 (Bahrain Island)
ANO	Anna 1 Astro (Cocos Islands)
ARFM	Arc 1950 (Mean value: Botswana, Lesotho, Malawi, Swaziland, Zaire, Zambia, and Zimbabwe)
ARFA	Arc 1950 (Botswana)
ARFB	Arc 1950 (Lesotho)
ARFC	Arc 1950 (Swaziland)
ARFE	Arc 1950 (Zaire)
ARFF	Arc 1950 (Zambia)
ARFG	Arc 1950 (Zimbabwe)
ARSM	Arc 1960 (Mean value: Kenya, Tanzania)
ARSA	Arc 1960 (Kenya)
ARSB	Arc 1960 (Tanzania)
ASC	Ascension Island 1958 (Ascension Island)
ATF	Astro Beacon "E" (Iwo Jima Island)
TRN	Astro Tern Is. 1961 (Tern Island, Hawaii)
SHB	Astro Dos 71/4 (St. Helena Island)
ASQ	Astro Station 1952 (Marcus Island)
AUA	Australian Geod. 1966 (Australia and Tasmania Is.)
AUG	Australian Geod. 1984 (Australia and Tasmania Is.)
IBE	Bellevue (IGN (Efate and Erromango Islands)
BER	Bermuda 1957 (Bermuda Islands)
BOO	Bogota Observatory (Colombia)
BUR	Bukit Rimpah (Bangka and Belitung Islands, Indonesia)
CAZ	Camp Area Astro (Camp McMurdo Area, Antarctica)
CAI	Campo Inchauspe (Argentina)
CAO	Canton Astro 1966 (Phoenix Islands)
CAP	Cape (South Africa)
CAC	Cape Canaveral (Mean value: Florida and Bahama Islands)
CGE	Carthage (Tunisia)
CHI	Chatham 1971 (Chatham Island, New Zealand)

| CHU | Chua Astro (Paraguay) |

COA	Corrego Alegre (Brazil)
BAT	Djakarta (Batavia) Sumatra Island, Indonesia)
GIZ	DOS 1968 0230 (Gizo Island, New Georgia Islands)
EAS	Easter Island 1967 (Easter Island)
EUR	European 1950 (Mean Value)
EURM	European 1950 (Mean Value: Austria, Belgium, Denmark, Finland, France, Federal Republic of Germany, Gibraltar, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden and Switzerland)
EURA	European 1950 (Western Europe: Austria, Denmark, France, Federal Republic of Germany, Netherlands, and Switzerland)
EURB	European 1950 (Greece)
EURC	European 1950 (Norway and Finland)
EURD	European 1950 (Portugal and Spain)
EURE	European 1950 (Cyprus)
EURF	European 1950 (Egypt)
EURH	European 1950 (Iran)
EURI	European 1950 (Sardinia)
EURJ	European 1950 (Sicily)
EURK	European 1950 (England, Channel Islands, Ireland, Northern Ireland, Scotland, Shetland Islands, and Wales)
EUQ	European 1979 (Mean value: Austria, Finland, Netherlands, Norway, Spain, Sweden, and Switzerland)
GAA	GAN Datum (Addu Atoll, Republick of Maldives)
GEO	Geodetic Datum 1949 (New Zealand)
GUA	Guam 1963 (Guam Island)
GSE	Genung Segara (Kalimantan Island, Indonesia)
DOB	GUX 1 Astro (Guadalcanal Island)
HEN	Herat (North Afghanistan)
HJO	Hjorsey 1955 (Iceland)
HKD	Hong Kong 1963 (Hong Kong)
HTN	Hu-Tzu-Shan (Taiwan)
INDA	Indian (Thailand and Vietnam)
INDS	Indian (Bangladesh, India, and Nepal)
IRL	Ireland 1965 (Ireland and Northern Ireland)
IST	ISTS 073 Astro 1969 (Diego Garcia)
JOH	Johnston Island 1961 (Johnston Island)
KAN	Kandawala (Sri Lanka)
KEG	Kerguelen Island 1949 (Kerguelen Island)
KEA	Kertau 1948 (West Malaysia and Singapore)
LCF	L.C. 5 Astro 1961 (Cayman Brac Island)
LIB	Liberia 1964 (Liberia)
LUZA	Luzon (Philippines except Mindanao Island)
MIK	Mahe 1971 (Mahe Island)
MAR	Marco Astro (Salvage Islands)

MAS	Massawa (Eritrea, Ethiopia)
MER	Merchich (Morocco)
MID	Midway Astro 1961 (Midway Island)
MIN	Minna (Nigeria)
NAHA	Nahrwan (Masirah Island, Oman)
NAHB	Nahrwan (United Arab Emirates)
NAHC	Nahrwan (Saudi Arabia)
NAP	Naparima (BWI Trinidad and Tobago)
NAS	North American 1927 (Mean Value)
NASC	North American 1927 (Mean value: CONUS)
NASA	North American 1927 (Eastern US)
NASB	North American 1927 (Western US)
NASD	North American 1927 (Alaska)
NASQ	North American 1927 (Bahamas, except San Salvador Island)
NASR	North American 1927 (San Salvador Island)
NASE	North American 1927 (Mean value: Canada)
NASF	North American 1927 (Alberta and British Columbia)
NASG	North American 1927 (Newfoundland, New Brunswick, Nova Scotia, and Quebec)
NASH	North American 1927 (Manitoba and Ontario)
NASI	North American 1927 (Northwest Territories and Saskatchewan)
NASJ	North American 1927 (Yukon)
NASO	North American 1927 (Canal Zone)
NASP	North American 1927 (Caribbean, Barbados, Caicos Islands, Cuba, Dominican Republic, Grand Cayman, Jamaica, Leeward Islands, and Turks Islands)
NASN	North American 1927 (Central America - Belize, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua)
NAST	North American 1927 (Cuba)
NASU	North American 1927 (Hayes, Peninsula, Greenland)
NASL	North American 1927 (Mexico)
NAR	North American 1983 (Mean Value: Alaska, Canada, CONUS, Mexico, and Central America)
FLO	Observatorio 1966 (Corvo and Flores Islands, Azores)
OEG	Old Egyptian (Egypt)
OHAM	Old Hawaiian (Mean value)
OHAA	Old Hawaiian (Hawaii)
OHAB	Old Hawaiian (Kauai)
OHAC	Old Hawaiian (Maui)
OHAD	Old Hawaiian (Oahu)
FAH	Oman (Oman)
OGBM	Ord. Survey G. G. 1936 (Mean Value: England, Isle of Man, Scotland, Shetland, and Wales)

OGBA	Ord. Survey G.B. 1936 (England)
OGBB	Ord. Survey G.G. 1936 (England, Isle of Man, and Wales)
OGBC	Ord. Survey G.B. 1936 (Scotland and Shetland Islands)
OGBD	Ord. Survey G. B. 1936 (Wales)
PLN	Pico de las Nieves (Canary Islands)
PIT	Pitcairn Astro 1967 (Pitcairn Island)
HIT	Prov. S. Chilean (S. Chile, 53 S.)
PRPM	Prov. S. Amer. 1956 (Mean value: Bolivia, Chile, Colombia, Ecuador, Guyana, Peru and Venezuela)
PRPA	Prov. S. Amer. 1956 (Northern Chile near 19 degrees south)
PRPC	Prov. S. Amer. 1956 (Southern Chile near 43 degrees south)
PRPD	Prov. S. Amer. 1956 (Columbia)
PRPE	Prov. S. Amer. 1956 (Ecuador)
PRPF	Prov. S. Amer. 1956 (Guyana)
PRPG	Prov. S. Amer. 1956 (Peru)
PRPH	Prov. S. Amer. 1956 (Venezuela)
PUR	Puerto Rico (Puerto Rico and Virgin Islands)
QAT	Qatar National (Qatar)
QUO	Qornog (South Greenland)
REU	Reunion (Mascarene Island)
MOD	Rome 1940 (Sardinia Island)
SAE	Santo (DOS) 1965 (Espirito Santo Island)
SAO	Sao Braz (Sao Miguel, Santa Maria Islands, Azores)
SAP	Sapper Hill 1943 (East Falkland Islands)
SCK	Schwarzeck (Namibia)
SANM	South American 1969 (Mean value: Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, Guyana, Paraguay, Peru, Trinidad and Tobago, and Venezuela)
SANA	South American 1969 (Argentina)
SANB	South American 1969 (Bolivia)
SANC	South American 1969 (Brazil)
SAND	South American 1969 (Chile)
SANE	South American 1969 (Columbia)
SANF	South American 1969 (Ecuador)
SANG	South American 1969 (Guyana)
SANH	South American 1969 (Paraguay)
SANI	South American 1969 (Peru)
SANK	South American 1969 (Trinidad and Tobago)
SANL	South American 1969 (Venezuela)
SOA	South Asia (Southeast Asia, Singapore)
POS	SE Base (Porte Santo) (Porto Santo & Madeira Islands)

GRA	SW Base (Faial, Graciosa, Pico, Sao Jorge, and Terceira Island, Azores)
TAN	Timbali 1948 (Brunei and East Malaysia - Sarawak and Sabah)
TOK	Tokyo (Mean Value)
TOYM	Tokyo (Mean value: Japan, Korea, and Okinawa)
TOYA	Tokyo (Japan)
TOYB	Tokyo (Korea)
TOYC	Tokyo (Okinawa)
TDC	Tristan Astro 1968 (Tristan da Cunha)
UND	Undetermined (processed as if WGS 84)
MVS	Viti Levu 1916 (Viti Levu Island, Fiji Islands)
ENW	Wake-Eniwetok 1960 (Marshall Islands)
WGC	World Geodetic System 1972
WGE	World Geodetic System 1984
YAC	Yacare (Uruguay)
ZAN	Zanderij (Surinam)

Code	Description
MHW	Mean High Water
MHWN	Mean High Water Neaps
MHWS	Mean High Water Springs
MHHW	Mean Higher High Water
MLW	Mean Low Water
MLWN	Mean Low Water Neaps
MLWS	Mean Low Water Springs
MLLW	Mean Lower Low Water

Code	Vertical Datum
MSL	Mean Sea Level (All elevations in the data set are referenced to the geoid of the specified datum.)
GEOD	Geodetic (All elevations in the data set are referenced to the ellipsoid of the specified datum.)

5.3.2.3 Projection codes and parameters. The following are the valid projection codes and parameters currently registered for RPF products.

Code	Name	Parameters			
		A	B	C	D
AC	Albers Equal Area	Central Meridian	Std. Parallel Nearest to Equator	Std. Parallel Farthest from Origin Equator	Latitude of Origin
AL	Azimuthal Equal Distant	Longitude of Tangency	Latitude of Tangency	---	---
RB	Hotline Oblique Mercator	Longitude of Great Circle	Latitude of Great Circle	Azimuth of great Circle	---
LE	Lambert Conformal Conic	Central Meridian	Std. Parallel Nearest to Equator	Std. Parallel Farthest from Origin Equator	Latitude of Origin
MC	Mercator	Central Meridian	Latitude of True scale	---	---
OC	Oblique Mercator	Longitude of Great Circle	Latitude of Great Circle	Azimuth of Great Circle	---
OD	Orthographic	Longitude of Tangency	Latitude of Tangency	---	---
PG	Polar Stereographic	Central Meridian	Latitude of True Scale	Latitude of Origin	Longitude of Origin
PH	Polyconic	Central Meridian	Latitude of Origin	---	---
TC	Transverse Mercator	Central Meridian	Meridian of True North	Central Scale Factor	---
UT	Universal Transverse Mercator	Central Meridian	---	---	---

5.3.2.4 Navigation systems codes. The following are the valid navigation system codes currently registered for RPF products.

Code	Description
0	Unknown
1	Circular Radio Beacon
2	CONSOL
3	DECCA
4	Radio Direction Finding
5	Direction Finding Beacon
6	Distance Finding
7	Long Range Air Navigation System (LORAN)
8	OMEGA
9	Undefined
10	Radar Response Beacon (RACON)
11	Radar
12	Radio
13	Radio Telephone
14	Undefined
15	TV
16	Microwave
17	Non-Directional Radio Beacon (NCB)
18	Non-Directional Beacon/Distance Measuring Equipment (NDB/DME)
19	Radio Range (RNG)
20	VHF Omni Directional Radio Range (VOR)
21	VHF Omni Directional (VOR/DME)
22	VHF Omni Directional (VORTAC)
23	Tactical Air Navigation Equipment (TACAN)
24	Instrument Landing System (ILS) (ILS/DME)
25	Localizer (LOC)
26	Localizer/Distance measuring Equipment (LOC/DME)
27	Simplified Direction Facility
28	Landing Distance Available (LDA)
29	Microwave Landing System (MLS)
31	Fan Marker
32	Bone Marker
33	Radio Telegraph
34	Ground Control Approach (GCA)
35	Radar Antenna
36	Undefined
37	Precision Approach Radar (PAR)
38	Aeronautical Radio
39	Undefined
40	Radio Beacon
41	Rotating Loop Radio Beacon

42	Visual Flight Rules (VFR) Test Signal Maker
43	Undefined
44	Consol Radio Beacon
45	Aeronautical Radio Beacon
46	Radar Station
47	Hifix
48	Hyperfix
999	Other

5.3.2.5 Ellipsoid codes. The following are the valid ellipsoid codes currently registered for RPF products.

Code	Description
AUN	Airy
BES	Australian National
bes	Bessel 1841
CLK	Bessel 1841 (Namibia)
CLJ	Clark 1866
EVE	Clark 1880
FM	Everest
FC	Fischer 1960
RE	Fischer 1968
GRS	Geodetic Reference System 1967
HE	Geodetic Reference System 1980
HO	Helmert 1906
INT	Hough
KRA	International
AAM	Krasovsky
EVM	Modified Airy
FA	Modified Fischer 1960
SA	(South Asia)
WGA	South American 1969
WGB	World Geodetic System 1960
WGC	World Geodetic System 1966
WGD	World Geodetic System 1972
	World Geodetic System 1984

5.3.2.6 Units of measure codes. The following are the valid units of measure codes currently registered for RPF products.

Code	Description
0	Unknown
1	Meters (Length, Area, Volume)
2	Kilopounds (Weight)
3	Seconds (Of Time)
4	Meters/Second (Speed)
5	Cubic Meters/Second (Flow)
6	Volt (Electrical Potential)
7	Watt (Ten to the Sixth (Electrical Power))
8	Hertz (Frequency)
9	± DDD MM SS.S (Angular)
10	± HH MM SS.S (Time)
11	International Nautical Mile (1852 meters)
12	Knot
13	Nautical Mile/Day
14	Feet
15	Fathom
16	Micrometers (Microns)
17	Mils
18	Seconds of arc
19	Minutes of arc
20	Degrees of arc
999	Other

5.3.2.7 Grid codes. The following are the valid grid codes currently registered for RPF products.

Code	Description
AD	Aden Zone
AF	Afghanistan Gauss-Krueger Grid
AG	Air Defense Grid
AI	Air Support Grid
AJ	Alabama Coordinate System
AK	Alaska Coordinate System
AL	Algeria Zone
AM	Albania Bonne Grid
AN	Alpha-Numeric (Atlas) Grid
AO	Arbitrary Grid
AP	American Samoa Coordinate System
AQ	Argentina Gauss-Krueger Conformal Grid
AR	Artillery Referencing System
AS	Arizona Coordinate System
AU	Australia Belts
AV	Arkansas Coordinate System
AW	Australian Map Grid
AX	Azores Gauss Conformal Grid
AZ	Azores Zone
BA	Baku 1927 Coordinate System
BB	Bavaria Solder Coordinate System
BC	Belgium-Lambert Grid
BE	Belgium Bonne Grid
BF	Brazil Gauss Conformal GridBO
BO	Borneo Rectified Skew Orthomorphic Grid
BW	British West Indies Grid
CB	California Coordinate System
CD	Canada British Modified Grid
CE	Ceylon Belt (Transverse Mercator)
CF	Canary Islands (Spanish) Lambert Grid
CG	Chile Gauss Conformal Grid
CH	China Belt
CI	Canary Islands Zone
CJ	China Lambert Zone
CK	Colorado Coordinate System
CM	Connecticut Coordinate System
CN	Caspian Zone
CO	Costa Rica Lambert Grid
CQ	Crimea Grid
CR	Crete Zone
CT	Cuba Lambert Grid
CU	Caucasus Zone

CV	Cape Verde Islands Zone
CW	British Cassini Grid
CX	Czechoslovak Uniform Cadastral Coordinate System
CY	Cyprus Grid
CZ	Czechoslovak Military Grid
DA	Danube Zone
DB	Dahomey Belt
DC	Denmark General Staff Grid
DD	Delaware Coordinate System
DE	Dominican Lambert Grid
DJ	Denmark Geodetic Institute System 1934
DK	Cape Verde Peninsula Grid
EA	East Africa Belt
EB	English Belt
ED	Egypt Gauss Conformal Grid
EE	El Salvador Lambert Grid
EF	Estonian Grid
EP	Egypt Purple Belt
ER	Egypt Red Belt
ET	Egypt 35 Degree Belt
FA	Fernando Poo Gauss Grid
FB	Fiji Grid
FC	Florida Coordinate System
FD	French Bonne Grid
FE	French Guiana Gauss Grid
FF	French Somaliland Gauss-LaBorde Grid
FI	French Indochina Grid
FJ	Franz Josef Land Zone
FL	French Lambert Grid
FO	Formosa (Taiwan) Gauss-Schreiber Coordinate System
FS	French Equatorial Africa Grid
GA	Gabon Belt
GB	Italy Gauss-Boaga Grid (Transverse Mercator)
GD	Gabon Gauss Conformal Grid
GE	World Geographic Reference System (GEOREF)
GF	Guadeloupe Gauss-LaBorde Grid
GG	Colombia Gause Conformal Grid
GH	Sweden Gauss-Hanover Grid
GI	Georgia Coordinate System
GK	Gauss-Krueger Grid (Transverse Mercator)
GL	Greece Azimuthal Grid
GN	German Army Grid (DHG)
GO	Ghana National Grid
GP	Greece Bonne Grid

| GQ

| Greece Conical Mecklenburg Coordinates |

GR	Greece Conical Mecklenburg Coordinate (New Numbering)
GT	Greenland Lambert Grid
GU	Guinea Zone
GV	Guam Coordinate System
GW	Guatemala Lambert Grid
GY	Guyana Transverse Mercator Grid
HB	Haiti Lambert Grid
HC	Hawaii Coordinate System
HD	Hawaii Grid
HE	Honduras Lambert Grid
HF	Hong Kong New System Cassini Grid
HG	Hungary Stereographic Grid
HK	Hong Kong Colony Grid
IA	Idaho Coordinate System
IB	Illinois Coordinate System
IC	Indiana Coordinate System
ID	Indonesia Mercator Grid
IE	Indonesia Polyhedric Grid
IF	Iowa Coordinate System
IG	Ivory Coast Azimuthal Grid
IH	Irish Cassini Grid
IJ	Ivory Coast Belt
IK	Irish Transverse Mercator Grid
IL	Iceland New Lambert Zone
IN	India Zone
IR	Iraq National Grid
IT	Italy Zone
IY	Ivy - Found on an HA in Marshall Islands
IZ	Iceland Zone
JA	Jamaica Foot Grid
JB	Japan Plane-Rectangular Coordinate System
JC	Japan Gauss-Schreiber Grid
JO	Johore Grid
KA	Austria Gauss-Krueger Grid
KB	Bulgaria Gauss-Krueger Grid
KC	Katanga Grid
KD	Kansas Coordinate System
KE	Kentucky Coordinate System
KF	Finland Gauss-Kreuger Grid
KG	German Gauss-Kreuger Grid
KH	Kenya Colony Grid
KJ	Korea Gauss-Schreiber Coordinate System
KK	Louisiana Coordinate System
KL	Lithuania Gauss-Kreuger Grid
KN	Kwantung Province Grid

KT
KW

Turkey Gauss-Kreuger Grid
Kwangsi Province Grid

KX	Luxembourg Gauss-Kreuger Grid
LC	Lambert Conformal Conic Grid
LD	Latvia Coordinate System
LE	Levant Zone
LF	Levant Stereographic Grid
LG	Liberia Rectified Skew Orthomorphic Grid
LI	Libya Zone
LL	Sirte (Libya) Lambert Grid
MA	Malaya Grid
MB	Malta Belt
MC	Maldives-Chagos Belt
MD	Madiera Zone
ME	Mediterranean Zone
MF	Maine Coordinate System
MG	Malaya Rectified Skew Orthomorphic (Yard) Grid
MH	Martinique Gauss Grid
MI	Maryland Coordinate System
MJ	Massachusetts Coordinate System
MK	Mexican Lambert Grid
ML	Michigan Coordinate System
MM	Mecca-Muscat Zone
MN	Minnesota Coordinate System
MO	Madagascar Grid (Laborde)
MP	Mississippi Coordinate System
MQ	Morocco Zone
MT	Missouri Coordinate System
MU	Mauritius Zone
MV	Montana Coordinate System
MW	Mozambique Lambert Grid
MX	Mozambique Polyconic Grid
NA	Northwest Africa Zone
NC	Nigeria Colony Belt
ND	National Grid of Great Britain
NE	Northern European Zone
NF	Nebraska Coordinate System
NG	Numeric Grid
NI	Niger Zone
NJ	Netherlands Stereographic Grid (Old Numbering)
NK	North Korea Gauss-Kreuger Grid
NL	Netherlands Stereographic Grid (New Numbering)
NM	Netherlands East Indies Equatorial Zone British Metric Grid (Lambert)
NO	Nord de Guerre Zone
NP	Nevada Coordinate System
NQ	New Sierra Leone Colony Grid

NR	New York Coordinate System
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NS	Netherlands East Indies Southern Zone
NT	New Zealand National Grid
NU	Nicaragua Lambert Grid
NV	Niger Belt
NW	North Caroline Coordinate System
NX	North Dakota Coordinate System
NY	Netherlands East Indies Equatorial Zone U.S. Yard Grid
NZ	New Zealand Belt
OA	Northern Malaya Grid
OB	Norway Gauss-Kreuger Grid
OD	Ohio Coordinate System
OE	Oklahoma Coordinate System
OR	Orange Report Net
OS	Oregon Coordinate System
PA	Palestine Belt
PB	Panama Lambert Grid
PC	Palestine Civil Grid (Cassini)
PD	Paraguay Gauss-Kreuger Grid
PE	Peiping Coordinate System of 1954
PF	Pennsylvania Coordinate System
PI	Peru Polyconic Grid
PJ	Philippine Plane Coordinate System
PK	Poland Gauss-Kreuger Grid
PL	Poland Quasi-Stereographic Grid
PP	Philippine Polyconic Grid
PQ	Portugal Bonne Grid, Old
PR	Portugal Bonne Grid, New
PS	Portugal Gauss Grid
PT	Puerto Rico Coordinate System
PU	Puerto Rico Lambert Grid
QA	Qatar Grid
QU	Qatar Peninsula Grid
RB	Russian Belt
RC	Reunion Gauss Grid
RD	Rhode Island Coordinate System
RE	Rumania Bonne Grid
RF	Soviet Coordinate System of 1942
RH	Rumania Lambert-Cholesky Grid
RI	Rumania Stereographic Grid
RT	Pulkovo Coordinate System of 1932
SA	South Africa Belt
SB	Senegal Gauss Conformal Grid (Belt)
SD	South Africa Coordinate System (Republic of South Africa)
SE	Senegal Belt
SF	South Carolina Coordinate System
SH	Sahara Zone
SI	South Dakota Coordinate System

SJ	South Libya Zone
SK	Sarawak Grid
SL	Spain Lambert Grid
SN	Southern New Guinea Grid
SQ	South Georgia Lambert Grid
SR	South Syria Lambert Grid
SS	Spanish North-Morocco Lambert Grid
SV	Svalbard Gauss-Kreuger Grid
SX	Svobodny 1935 Coordinate System
SY	Seychelles Belt
SZ	Spitzbergen Zone
TA	Tanganyika Territorial Grid
TB	Tashkent 1875 Coordinate System
TC	Tennessee Coordinate System
TD	Texas Coordinate System
TE	Tobago Grid
TF	Trinidad Grid
TG	Trucial Coast Cassini Grid
TH	Trucial Coast Transverse Mercator Grid
TI	Turkey Bonne Grid
TN	Tunisia Zone
UA	Uganda Cassini Coordinate System
UB	Unidentified Grid
UC	Uruguay Gauss-Kreuger Grid
UD	Utah Coordinate System
UP	Universal Polar Stereographic System
US	U.S. Polyconic Grid System
UT	Universal Transverse Mercator Grid
VA	Vermont Coordinate System
VB	Virginia Coordinate System
VE	Venezuela Modified Lambert Grid
VI	Viet Nam Azimuthal Grid
WA	West Malaysia Rectified Skew Orthomorphic (Metric) Grid
WB	Switzerland Bonne Grid
WC	Switzerland Conformal Oblique Cylindrical Grid
WD	West Virginia Coordinate System
WE	Wisconsin Coordinate System
WF	Wyoming Coordinate System
WP	World Polyconic System
YA	Yugoslavia Gauss-Kreuger Grid (Not Reduced)
YU	Yunnan Province Grid

5.3.3 Relationship code. The <relationship code> describes the relationship between two or more RPF [frame file]s. Valid codes are listed below.

Code	Description
1	Stereographic pairs
2	Legend Image
3-65535	Reserved for future standardization

5.4 NITF registered data tags. The following codes are valid NITF registered data tags for use by RPF products which are written in an NITF message.

Tag	Description
RPFHDR [†]	User Defined Header Section for RPF
RPFIMG [†]	User Defined Image Section for RPF
RPFDES [†]	Data Extension Segment for RPF

[†] Pending approval by the NITF technical board

6. NOTES

This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.

6.1 Intended use. This document is intended for use with MIL-STD-2411, Military Standard for Raster Product Format (RPF), and all specifications governed by that military standard. Identification codes and values tabulated in this document are the registered data values to be used in all products conforming to the RPF standard. The registered data values are included in this document, separate from MIL-STD-2411 so that new values can easily be added to the registered data set without modifying the governing standard.

6.2 Acquisition requirements. When this standard is used in acquisition, the applicable issue of DODISS must be cited in the solicitation (see 2.1.1 and 2.2).

6.3 International standardization agreements. This section is not applicable to this standard.

6.3.1 International Standardization Agreements (STANAGs). This section is not applicable to this standard.

6.3.2 Quadripartite Standardization Agreements (OSTAGs). This section is not applicable to this standard.

6.3.3 Air Standardization Coordinating Committee Agreements (ASCCs). This section is not applicable to this standard.

6.3.4 International MC&G Agreements. This section is not applicable to this standard.

6.3.5 Executive Orders. This section is not applicable to this standard.

6.3.7 InterAgency Agreements. This section is not applicable to this standard.

6.3.7 Other Documentation. This section is not applicable to this standard.

6.4 Subject term (key word) listing. RPF; Registered Data Values.

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CONCLUDING MATERIAL

Custodian:
DMA - MP

Preparing activity:
DMA - MP

Agent: AFMC

Review activities:
Air Force - 09
Army - PO
Navy - NO
Marine Corps - MC

(Project MCGT-0122)